

Background paper on SIPRI military expenditure data, 2011¹

Overview

World military expenditure stops growing in 2011

World military spending in 2011 is estimated to have been \$1,738 billion. While the figure is higher in dollar terms than in 2010, this is largely the result of changes in prices and, more importantly, a falling dollar. When measured in real terms (constant 2010 prices), the total for 2011 is just 0.3 per cent higher than in 2010. Given the uncertainties in the data, this means that world military spending was essentially unchanged in 2011, breaking a 13-year run of continuous military spending increases.

The levelling-out of military spending results from a very mixed pattern of changes in different countries and regions. (See figure 4, tables 2 and 3). This included:

- A decrease in the US of 1.2 per cent in real terms, the first fall in US military spending since 1998;
- A moderate increase in Asia and Oceania (2.3 per cent);
- Falls in Western and Central Europe (1.9 per cent) due to austerity measures, matched by a large increase (10.2 per cent) in Eastern Europe;
- A substantial increase (4.6 per cent) in the Middle East;
- A moderate (3.3 per cent) decrease in Latin America; and
- A large increase (8.6 per cent) in Africa.

It is too early to say whether the flattening of military spending represents a long-term change of trend. On the one hand, US spending is likely to fall due to the withdrawal of US forces from Iraq and the draw-down in Afghanistan, while austerity measures in Europe are likely to mean continuing falls there in the next 2 to 3 years. On the other hand, spending in Asia, Africa and the Middle East continues to increase. Meanwhile, any major new Middle East conflict could change the picture dramatically, both for countries in the region and for the US. But barring such an event, it seems likely that the rapid increases of the last decade are over for now.

Why is the world total uncertain?

There are several sources of uncertainty in the SIPRI estimates for world and regional totals, especially for the most recent year. These include:

- Missing data for numerous countries, especially in the final year, that must therefore be estimated;
- Final year figures are mostly budgeted rather than actual spending;
- For some countries, further estimates in the last year are necessary due to differing sources; and
- Uncertainties in the data for some countries more generally.

¹ This background paper is based on the data and analysis forthcoming in *SIPRI Yearbook 2012: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2012).

Figure 1. Shares of world military spending for the top 10 spenders, 2011.

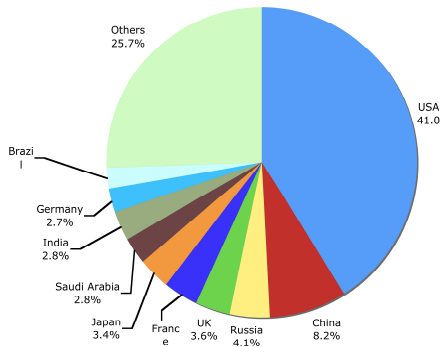
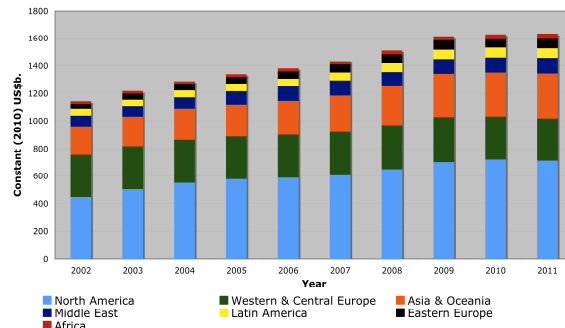


Figure 2. World military spending by region, 2002–2011. Figures are in constant (2010)



The impact of austerity measures and deficit reduction

In the United States

In the USA, military spending—for which SIPRI includes ‘outlays for National Defense’ as published by the Whitehouse Office of Management and Budget, plus military aid from the Department of State—decreased slightly in 2011 for the first time since 1998. One key reason for this is the long delay in Congress agreeing a budget for Fiscal Year (FY) 2011 as the Administration clashed with Congressional Republicans over measures to reduce the budget deficit, so that the Department of Defense was operating on a series of ‘continuing resolutions’, delaying procurement plans.²

Further falls in actual spending can be expected in the coming years, based on the levels of budget authority for National Defense approved or requested for FYs 2011–2013, which show clear falls. Outlays tend to follow budget authority with a year’s delay. Two principle factors drive the falling trend:

- The withdrawal of US forces from Iraq and the gradual drawdown in Afghanistan, which means reduced spending on the additional war budget, otherwise known as Overseas Contingency Operations. This can be expected to continue if plans to end combat operations in Afghanistan in 2014 are fulfilled, and if the US does not become involved in any major new war.
- The Budget Control Act, passed by Congress in 2012 as an attempt to reduce US national debt, will also affect military spending. The immediate effect of the Act was to require cuts of \$487 billion from the Department of Defense budget from 2012–21, compared with previous plans. However, as those plans involved an increasing ‘base’ DoD budget (excluding Overseas Contingency Operations), the effect of the Act will mean relatively flat budgets in real terms up to 2021.³

² Majumdar, D., ‘Lack of ’11 budget will soon hurt USAF: officials’, *Defense News*, 7 Feb. 2011, p. 8.

³ Harrison, T., ‘Strategy in a year of fiscal uncertainty’, *Centre for Strategic and Budgetary Assessments Backgrounder*, Feb. 2010, <<http://www.csbaonline.org/publications/2012/02/trategy-in-a-year-of-fiscal-uncertainty/>>.

The combined effects of these two factors will likely mean falling overall military spending for the next few years. These falls may be much higher if further cuts mandated by the 'automatic sequestration' clause of the Budget Control Act take place.⁴ This provides for automatic across-the-board cuts theoretically commencing in January 2013 and totalling \$1.2 trillion by 2021, including \$500 billion from National Defense. However, several members of Congress have initiated moves to prevent or delay the military spending portion of the cuts from taking effect, arguing that such cuts would jeopardize US national security.⁵ These additional cuts have not been accounted for in current budget projections, or in the Administration's FY2013 budget request.

In Europe

Austerity measures have been sweeping across Europe since 2010, as countries have prioritized deficit reduction above other economic goals, and military expenditure cuts have usually been part of such measures. As a result, a majority of countries have cut military spending since the global financial and economic crisis broke in 2008. However, the patterns and extent of these cuts have varied widely. In most of western Europe, military spending did not begin to fall until 2010, as most countries put in place stimulus measures in 2009, before action to cut deficits began in 2010. In most central and eastern European countries, however, military spending began to fall in 2009, as these generally weaker economies could not sustain such high budget deficits. As a result, and due to the more severe effects of the crisis on Gross Domestic Product (GDP) in these countries, the overall falls in military spending in central and eastern Europe have been particularly sharp.

Among western European countries, the countries with the biggest falls have included many that have faced severe sovereign debt crises, and where austerity measures have been particularly harsh: **Greece** (down 26 per cent since 2008), **Spain** (18 per cent), **Italy** (16 per cent) and **Ireland** (11 per cent); but also **Belgium** (12 per cent). In contrast, the top 3 spenders in western Europe—the **United Kingdom, France and Germany**—have so far made only modest cuts in military spending, in each case less than 5 per cent. **Germany** and the UK both plan further cuts in military spending in the coming years: the UK by 7.5 per cent in real terms by 2014/15, and Germany by around 4 per cent in cash terms by 2015. France plans roughly constant spending in real terms.⁶

⁴ In addition to the \$1.2 trillion in cuts directly imposed by the Budget Control Act, the Act established a Congressional 'Super-committee'—a joint House/Senate committee—tasked with finding at least a further \$1 trillion in cuts over 10 years. The Act provided that if the Super-committee failed to reach agreement, then a further \$1.2 trillion in cuts would be automatically applied proportionately from January 2013 to all areas of Federal Government spending in a mechanism known as 'automatic sequestration'. As the Super-committee did not reach agreement, the present position is that automatic sequestration will be applied if no new Act of Congress reverses it.

⁵ 'U.S. Senators introduce plan to avoid additional spending cuts', *Defense News*, 2 Feb. 2012, <<http://www.defensenews.com/article/20120202/DEFREG02/302020006/U-S-Senators-Introduce-Plan-Avoid-Additional-Spending-Cuts>>.

⁶ HM Treasury, *Spending Review 2010*, CM7942, Oct. 2010, <http://cdn.hm-treasury.gov.uk/sr2010_completereport.pdf>; Government of France, 'LOI n° 2010-1645 du 28 décembre 2010 de

⁷ E.g. Poghosyan, A., 'Possible war over Nagorno-Karabakh or weapons "fashion show"', *Journal of Conflict Transformation Caucasus Edition*, 1 Nov. 2011, <<http://caucasusedition.net/analysis/possible-war-over-nagorno-karabakh-or-weapons-fashion-show/>>.

Russia increases its military spending

Despite experiencing a severe recession in 2009, **Russia** has increased military spending by 16 per cent in real terms since 2008, including a 9.3 per cent increase in 2011. Russia is now the third largest military spender worldwide, overtaking the UK and France. Further increases in military spending are planned, with draft budget plans showing a 53 per cent increase in real terms of funds allocated to 'National Defence' up to 2014.⁸ In the longer term, Russia plans to spend 23 trillion roubles (\$749 billion) on equipment, research and development (R&D) and support for the Russian arms and military services industry over the period 2011–2020, with plans to replace 70 per cent of Russia's mostly Soviet-era military equipment with modern weaponry by 2020.⁹ However, many analysts are doubtful as to whether the industry will be able to deliver on such ambitious plans after decades of stagnation following the collapse of the Soviet Union.

Table 1. The 10 countries with the highest military expenditure in 2011

Spending figures are in US\$, at current prices and exchange rates. Countries are ranked by military spending calculated using market exchange rates (MER).

Rank 2011 (2010)	Country	Spending (\$ b., MER)	Change, 2010–11 (%)	Change, 2002–11 (%)	Share of GDP (%, estimate) ^a
1 (1)	United States	711	-1.2	59	4.7
2 (2)	China	[143]	6.7	170	[2.0]
3 (5)	Russia	[71.9]	9.3	79	[3.9]
4 (3)	United Kingdom	62.7	-0.4	18	2.6
5 (4)	France	62.5	-1.4	-0.6	2.3
6 (6)	Japan	59.3	0	-2.5	1.0
7 (9)	India	48.9	-4.9	66	2.6
8 (7)	Saudi Arabia ^b	48.5	2.2	90	8.7
9 (8)	Germany	[46.7]	-3.5	-3.7	[1.3]
10 (11)	Brazil	35.4	-8.2	19	1.5
	World	1 738	0.3	42	2.5

[] = estimated figure; GDP = gross domestic product.

^a The figures for national military expenditure as a share of GDP are based on estimates for 2011 GDP from the IMF *World Economic Outlook* database, September 2011.

^b The figures for Saudi Arabia include expenditure on internal security.

⁸ Cooper, J., 'Military spending in the Russian federal budget, 2010–2014', unpublished paper, 12 Aug. 2011, available on request from the author. SIPRI's figures for Russia also include military pensions, expenditure on paramilitary forces and estimates for a number of other small items.

⁹ 'Putin outlines plans for stronger military', *Defense News*, 20 Feb. 2012, <<http://www.defensenews.com/article/20120220/DEFREG01/302200005>>.

Asian military spending continues to rise

Military spending in Asia and Oceania continued to increase in 2011. However, the real terms increase of 2.3 per cent was, as in 2010, slower than in most recent years. Between 2000 and 2009, the regional total increased by an annual average of 6.3 per cent in real terms. Increased spending by China—6.7 per cent in real terms, or just over \$8 billion in constant 2010 prices—more than accounted for the total regional increase. In the rest of Asia and Oceania, total military spending decreased marginally by 0.4 per cent, although this reflects a mixed pattern of increases and decreases.

China has increased its military spending by 170 per cent in real terms since 2002, and by more than 500 per cent since 1995. According to SIPRI's estimate, Chinese military spending in 2011 was 923 billion Yuan Renminbi (\$143 billion), the second highest in the world. At the same time, China's military spending has remained extremely stable as a share of GDP, at approximately 2 per cent since 2001. Thus, the increases in military spending have been in line with China's rapid economic growth. The increased military spending has allowed both increased salaries and better conditions for troops, as well as extensive modernization of military equipment and technology, as part of a drive to 'informationize' the armed forces.¹⁰ Chinese military technology remains, however, one to two generations behind that of the US.¹¹

China's increasing military spending has caused concern among China's neighbours, as well as the dominant Pacific power, the US. The recent announcement of a US 'pivot' towards Asia is in part a response to such concerns.¹² China's extensive and growing trade relations with the countries in its neighbourhood have been marred by disputes—e.g. the border dispute with India, a dispute over the Senkaku (Diaoyu) islands with Japan, and contested maritime borders with several nations in the South China Sea—all of which have led to increased tensions.

However, talk of an 'arms race' in the region may be premature, as both data and analysis reveal a mixed pattern of trends in military expenditure and arms acquisition,

SIPRI's estimate for Chinese military spending

China's official defence budget—598 billion Yuan (\$93 billion) in 2011—does not include all financial resources for the military. In addition, SIPRI includes figures or estimates for the following (largest first):

- Estimates for additional military R&D spending;
- Published figures for spending on the paramilitary People's Armed Police;
- Estimates for additional military construction spending;
- Published figures for spending by the Ministry of Civil Affairs on demobilization payments for soldiers;
- Estimates for subsidies to the arms industry;
- Estimates for spending on arms imports; and
- A small estimate for residual commercial activities of the People's Liberation Army.

For more details, see *SIPRI Yearbook 2011, Appendix 4A, pp. 185–188*.

¹⁰ E.g. China Ministry of National Defense, *China's National Defense in 2010*, March 2011, <http://news.xinhuanet.com/english2010/china/2011-03/31/c_13806851.htm>.

¹¹ Minnick, W. 'PLA 20 years behind U.S. military: Chinese DM', *Defense News*, 7 June 2011, <<http://www.defensenews.com/article/20110607/DEFSECT02/106070309/PLA-20-Years-Behind-U-S-Military-Chinese-DM>>.

¹² US Department of Defense, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*, Jan. 2012, <http://www.defense.gov/news/Defense_Strategic_Guidance.pdf>.

with China far from the only driving factor. Two countries where concerns over China do appear to have contributed to increased spending are India and Viet Nam. India has increased military spending by 66 per cent since 2002. While both internal conflicts and the long-running conflict with Pakistan remain key issues, India in many ways sees China as a rival for regional power. The long-running border dispute, for example, exacerbates tensions between the two countries. Viet Nam has increased military spending by 82 per cent since 2003, and has made several major naval acquisitions, partly due to tensions with China in the South China Sea.¹³ Nevertheless, both India's and Viet Nam's military spending fell in real terms in 2011.

In contrast, Taiwan has made only very modest increases in military spending, totalling 13 per cent since 2002, in part due to the fact that recently re-elected President Ma has pursued a policy of warming relations with China. Japan has seen a gradual decline in its military spending over the past decade. The Philippines, which also experiences significant maritime tensions with China, has increased spending by just 7.4 per cent since 2002, with few major arms purchases.

Other Asian countries have made large military spending increases, but with little relation to China. Indonesian military spending has increased by 82 per cent since 2002, reflecting efforts to build a 'Minimum Essential Force' to enable the country to control its vast archipelago, and also perhaps the continued political influence of the military.¹⁴ Increases by Thailand (66 per cent) and Cambodia (70 per cent) are partly the result of their tense border dispute, which saw several armed clashes in 2010 and 2011. In Thailand's case the long-running insurgency in the south has also contributed to the increase, as did domestic unrest following the military coup in 2006, after which military spending accelerated rapidly.¹⁵

Other regions

Latin America

- The large increase in 2010 (5.1 per cent) has not continued in 2011, with the region seeing a 3.3 per cent fall in military spending in real terms.
- The fall is mostly due to Brazil, which cut its initial discretionary military budget (including equipment purchases, but excluding e.g. salaries) by 25 per cent as part of measures to cool the economy and reduce inflation.¹⁶
- Elsewhere, there was a mixed pattern of increases and decreases.
- Mexico's military spending has increased by 5.7 per cent in 2011, and by 52 per cent since 2002, largely due to the increasing involvement of the military in tackling drug cartels.¹⁷

¹³ SIPRI Arms Transfers Database, <<http://www.sipri.org/databases/armstransfers>>.

¹⁴ Anderson, G. and Grevatt, J., 'Island vision', *Jane's Defence Weekly*, 28 Sep. 2011, pp. 28–32.

¹⁵ Chachavalpongpan, P., 'Internal conflicts now shaping defence policy', *South China Morning Post*, 14 Mar. 2011.

¹⁶ Lima, M. S., 'Governo oficializa corte de R\$ 50 bi no orçamento de 2011' [Government formalizes cut of R\$50 billion in the 2011 budget], *Folha*, 9 Feb. 2011.

¹⁷ Fainaru, S. and Booth, W., 'As Mexico battles cartels, the army becomes the law', *Washington Post*, 2 Apr. 2009.



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Middle East

- The figure for the Middle East for 2011 is highly uncertain, due to a lack of data for Iran, Qatar, the United Arab Emirates (UAE) and Yemen, for whom figures have had to be estimated.
- It is not yet possible to assess the impact of the Arab Spring on military expenditure in the region, as the available figures are from budgets set before the uprisings began.
- Of countries for whom data is available, the largest increase was by Iraq, at 55 per cent. However, as Iraq has consistently underspent its defence budget in recent years, the final figure for 2011 may be significantly lower.
- Other countries making significant increases were Bahrain (14 per cent), Kuwait (9.8 per cent), Israel (6.8 per cent) and Syria (6.1 per cent), while Oman made a cut of 17 per cent.

Africa

- The increase in Africa was entirely accounted for by the 44 per cent increase in Algeria. Excluding Algeria, military expenditure in Africa was essentially constant.
- In Algeria, a mid-year supplementary budget in July increased the initial budget allocation for the military by 22 per cent, largely due to concerns about potential spillovers from the conflict in Libya.¹⁸ Moreover, the country has been undertaking a major re-armament programme that made it the seventh largest importer of major conventional weapons between 2007–11, fuelled by its growing revenue from oil and gas exports.¹⁹
- Nigeria has also increased military spending rapidly in recent years, also fuelled by oil wealth, and with significant expenditure on military internal security operations, against rebel groups in the Niger Delta and the Islamist terrorist group Boko Haram.²⁰
- The figures for Africa are highly uncertain due to missing data for numerous countries including, most significantly, Sudan, Libya and Eritrea.

¹⁸ 'L'Algérie révisé sa politique de défense face aux menaces en Libye' [Algeria revises its defence policy in the face of threats from Libya], *Global Net*, 9 Sep. 2011, <<http://www.gnet.tn/revue-de-presse-internationale/lalgerie-revise-sa-politique-de-defense-face-aux-menaces-en-libye/id-menu-957.html>>.

¹⁹ See SIPRI Arms Transfers Database, <<http://www.sipri.org/databases/armstransfers>>.

²⁰ 'Nigeria: military in biggest peacetime deployment—investigation', *Daily Trust*, 20 Sep. 2011, <<http://allafrica.com/stories/201109201120.html>>.



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Table 2. Military expenditure by region, 2002-11

Figures for 2002–2011 are in US \$b. at constant (2010) prices and exchange rates. Figures for 2011 in the right-most column, marked *, are in current US\$ b. for 2011. Figures do not always add up to totals because of the conventions of rounding.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2011 (current US\$)
World total	1 146	1 218	1 286	1 340	1 383	1 436	1 513	1 613	1 629	1 634	1 738
United States	432	492	536	562	571	586	629	680	698	690	711
Rest of the world	713	725	750	777	812	850	884	934	931	945	1026
<i>Geographical regions</i>											
Africa	19.5	19.4	21.8	22.7	23.7	(24.5)	(27.9)	(28.6)	(29.6)	(32.2)	(34.3)
North Africa	6.3	6.5	7.1	7.3	7.3	8.0	9.4	(10.0)	(10.5)	(13.1)	(13.9)
Sub-Saharan Africa	13.2	12.9	14.8	15.4	16.3	(16.6)	(18.5)	(18.6)	(19.1)	(19.1)	(20.4)
Americas	497	552	600	631	644	664	714	768	791	780	809
Central America and the Caribbean	4.9	4.8	4.4	4.7	5.1	5.7	5.8	6.4	6.5	6.7	7.0
North America	448	508	552	579	588	605	650	701	721	713	736
South America	44.9	40.1	43.1	47.2	51.0	53.5	58.6	60.3	63.6	61.1	66.0
Asia and Oceania	204	213	224	236	249	267	283	317	322	330	364
Central and South Asia	34.5	35.5	40.4	42.8	43.5	44.9	49.3	56.6	57.4	55.9	61.7
East Asia	131	137	143	151	162	175	185	208	212	221	243
Oceania	18.1	18.5	19.2	19.8	20.9	22.2	22.9	24.6	24.9	24.6	28.6
South East Asia	19.9	22.0	21.6	22.0	22.5	25.6	26.2	27.5	27.4	28.2	31.0
Europe	347	352	354	356	365	373	384	392	375	376	407
Eastern Europe	38.7	41.4	43.3	47.9	53.4	58.9	64.9	66.4	65.5	72.1	80.5
Western and Central Europe	308	310	311	308	311	314	319	325	310	304	326
Middle East	78.0	81.5	86.3	94.3	101	107	104	(108)	(111)	(116)	(123)
<i>World military burden, i.e. world military spending as a share of world gross domestic product (%)</i>											
	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.7	2.6	2.5	



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Table 3. Key military expenditure statistics by region

() = total based on country data accounting for less than 90% of the regional total.

Region/ Subregion	Military expenditure 2011 (US\$ b.)	Change, 2010–11 (%) ^a	Change, 2002–11 (%) ^a	Major increases, 2011 ^b State	Change (%)	Major decreases, 2011 ^b State	Change (%)
<i>Africa</i>	(34.3)	8.6	65	Zimbabwe	50	Lesotho	–24
North Africa	(13.9)	25	110	Algeria	44	Ghana	–23
Sub-Saharan Africa	(20.4)	–0.1	44	DRC	15	Côte d’Ivoire	–16
				Madagascar	12	Kenya	–16
<i>Americas</i>	809	–1.4	57	Paraguay	34	Dominican Rep.	–9.4
Central America and Caribbean	7.0	2.7	36	Chile	12	Argentina	–9
North America	736	–1.2	59	Guatemala	7.1	Brazil	–8.2
South America	66.0	–3.9	66	Mexico	5.7	Venezuela	–7.4
<i>Asia and Oceania</i>	364	2.4	62	Afghanistan	36	Philippines	–8.7
Central and South Asia	61.7	–32.7	62	Indonesia	12	Viet Nam	–6.9
East Asia	243	4.1	69	Kazakhstan	9.7	Sri Lanka	–6.5
South East Asia	31.0	2.7	42	Malaysia	9.4	Brunei	–5.9
Oceania	28.6	–1.2	36				
<i>Europe</i>	406	0.2	8.3	Azerbaijan	89	Bulgaria	–19
Eastern Europe	80.5	10.2	86	Switzerland	12	Georgia	–18
Western and Central Europe	326	–1.9	–1.5	Norway	11	Slovakia	–14
				Russia	9.3	Slovenia	–13
<i>Middle East</i>	(123)	4.6	49	Iraq	55	Oman	–17
				Bahrain	14	Egypt	–4.2
				Kuwait	9.8	Jordan	–4.2

() = uncertain estimate.

^a Changes are in real terms.

^b List of largest increases and decreases are for the region as a whole, rather than by subregion. Countries with less than \$100 million military spending in 2011, or \$50 million in Africa, are excluded.